

CLAIMS

What is claimed is:

- 5 1. A hERG channel-expressing cell population comprising cells capable of expressing a channel of which the hERG current as determined by patch clamping with a fully automated high throughput patch clamp system is 0.6 nA or more, wherein the ~~proportion~~ratio of said cells is 40% or more relative to the total number of hERG gene-transferred cells within said population.—
- 10 2. The cell population according to claim 1, wherein the hERG gene has been transferred with a virus vector.
- 15 3. The cell population according to claim 2, wherein the virus vector is a retrovirus vector or a lentivirus vector.
- 20 4. The cell population according to ~~any one of claims 1 to 3~~ claim 1, wherein the average value of the hERG current in the total cell population~~cells~~ is 0.3 nA or more.
- 25 5. A cell capable of expressing a hERG channel of which the hERG current as determined by patch clamping with a fully automated high throughput patch clamp system is 1.0 nA or more.—
- 30 6. The cell according to claim 5, wherein the hERG gene has been transferred with a virus vector.
- 35 7. The cell according to claim 6, wherein the virus vector is a retrovirus vector or a lentivirus vector.
- 30 8. A method of preparing the cell population according to ~~any one of claims 1 to 4 or the cell according to any one of claims 5 to 7~~claim 1, the method comprising~~which comprises~~ expressing hERG channels ~~using~~via a virus vector.
- 35 9. The method according to claim 8, wherein the virus vector is a retrovirus vector or a lentivirus vector.

10. ~~(Canceled)~~The method according to claim 8, wherein the virus vector is a retrovirus vector.
- 5 11. The method according to claim 8~~any one of claims 8 to 10~~, the method further comprising the~~which comprises~~ a step of concentrating the virus vector by ultracentrifugation.
- 10 12. A method of measuring hERG current inhibitory activity, the method comprising~~which comprises~~ using the cell population according to ~~any one of claims 1 to 4 or the cell according to any one of claims 5 to 7~~claim 1.—
- 15 13. The method according to claim 12, the method further comprising~~which comprises~~ using a fully automated high throughput patch clamp system.
- 20 14. A method of measuring hERG current inhibitory activity, the method comprising~~which comprises~~ using a cell population or a cell prepared by the method according to ~~any one of claims 8-9, or to 11~~claim 8.
- 25 15. The method according to claim 14, the method further comprising~~which comprises~~ using a fully automated high throughput patch clamp system.
- 30 16. A method of screening a compound~~for compounds~~, or a salts~~salts~~ thereof for its hERG current altering effect, ~~that alter or not alter hERG currents~~, the method comprising~~which comprises~~ using the cell population according to ~~any one of claims 1 to 4 or the cell according to any one of claims 5 to 7~~claim 1.—
- 35 17. The method according to claim 16, the method further comprising~~which comprises~~ using a fully automated high throughput patch clamp system.
18. A method of screening a compound~~for compounds~~, or a salts~~salts~~ thereof for its hERG current altering effect, ~~that alter or not alter hERG currents~~, the method comprising~~which comprises~~ using a cell population or a cell prepared by the method according to ~~any one of claims 8-9, or to 11~~claim 8.

19. The method according to claim 18, ~~the method further comprising~~~~which comprises~~ using a fully automated high throughput patch clamp system.—

20. A method of measuring hERG current inhibitory activity, the method comprising using
5 the cell population according to claim 5.

21. A method of screening a compound or a salt thereof for its hERG current altering effect,
the method comprising using the cell population according to claim 5.